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A Taxonomic Revision of Tyrini of the Oriental Region

III. *Megatyrus* (Coleoptera, Staphylinidae, Pselaphinae), a New Genus of the Tyrina from China and Vietnam

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Abstract *Megatyrus* gen. nov. and three new species, *M. menglianensis* sp. nov., *M. laqueus* sp. nov. and *M. coni* sp. nov. are described and illustrated from China and Vietnam. The genus is compared with the most closely related genus *Tyrus* Aubé.

Key words: Coleoptera, Staphylinidae, Pselaphinae, Tyrini, *Megatyrus* gen. nov., Oriental Region, taxonomy.

Introduction

In spite of a number of recent studies, the pselaphid fauna of Southeast Asia is still very poorly known. This is specially true for China and Vietnam. For example in Yunnan, already described species is very few (1.3%) in the list of species collected in 1992–1998 (Nomura, 2000). Collecting efforts of the second author in the region yielded many new interesting pselaphids, one new genus with three new species of the tribe Tyrini are described below.

Materials and Methods

The material used for this study is deposited in the following collections: IEBR – Institute of Ecology and Biological Resources, Hanoi, Vietnam; NSMT – National Science Museum, Tokyo, Japan.

Dissections were made using standard techniques, genitalia and small parts were mounted in Euparal on an acetate label on the same pin with the specimen. Leica MS5 microscope was used for this study.

Genus ***Megatyrus*** nov.

Type species: *Megatyrus menglianensis* sp. nov.

Etymology. The name is a combination of the Greek prefix "mega-" meaning large, and *Tyrus*, showing the close relation to *Tyrus*. Gender masculine.

Description. Body large and robust, color dark reddish-brown, shining, maxillary palpi lighter.

Head (Fig. 2 A, B) elongate, about 1.5 times as long as wide (measured without eyes), wider at base than in frons, regularly and densely punctured, pubescent; eyes large and protuberant; frons bilobed with a frontal and a pair of vertexal foveae, and a narrow and deep longitudinal groove from frontal foveae to frontal margin; genae broadened anteriorly before eyes, weakly rounded on temples, with a pair of cylindrical projections on ventral side. Maxillary palpi (Fig. 2 C–E) four-segmented, segments II–IV nearly subequal in length, each long, elongate and pedunculate; palpal spine (pseudosegment) absent. Antennae eleven-segmented, surpassing the apical margin of pronotum, segment I thick, angulately projected laterad in basal part in male, subcylindrical in female, II to VI nearly subequal, each longer than wide, subcylindrical, VIII the smallest, IX to XI thick, each oval, and elongate.

Pronotum slightly elongate, almost smooth with dense pubescence on dorsal surface, with a well defined transverse groove connecting basimedian and a pair of basilateral foveae in antebasal part. Mesosternum about a half as long as metasternum, glabrous in the middle, slightly pubescent on lateral sides; metasternum broad, covered with long, golden pubescence, with a well defined and setose median fovea, a pair of weakly defined lateral foveae and a large and deep elongate depression. Elytra slightly pubescent and punctured, with two basal foveae prolonged by striae, sutural stria reaching the apex and discal stria extending to the apical quarter of elytra, humeri prominent. Legs long and robust, with weak, scattered punctures, and pubescent; trochanters simple; femora slightly clavate lacking spines or spurs; tarsi three-segmented, segment I small, II linear and shorter than III, III inserted at the apex of II.

Abdomen large and thick; tergite IV the largest, about twice as long as V, transverse, with a deep and narrow transverse groove at base, well defined median carinae and a pair of very large paratergites. Male genital segments including segments VIII to IX and male genitalia; tergite VIII short and narrowed posteriorly, with a pair of very deep lateral foveae; each fovea extending basilaterally and gradually narrowed distad; sternite VIII large and flattened; sternite IX very small; parameres strongly reduced or invisible; median lobe of male genitalia strongly sclerotized, bulbous in basal part, with a large and circular membranous part on dorsal side, apical part narrowed; endophallus comprising one or two large and elongate sclerite(s). Female genital segments consisting of segment VIII and complicated genital plate probably including sternite IX; tergite VIII large and thick, with a pair of lateral foveae; each lateral fovea less extending than in male; sternite VIII very short, subcrescent; genital plate composed of upper and lower sclerites surrounding vagina, various in structure.

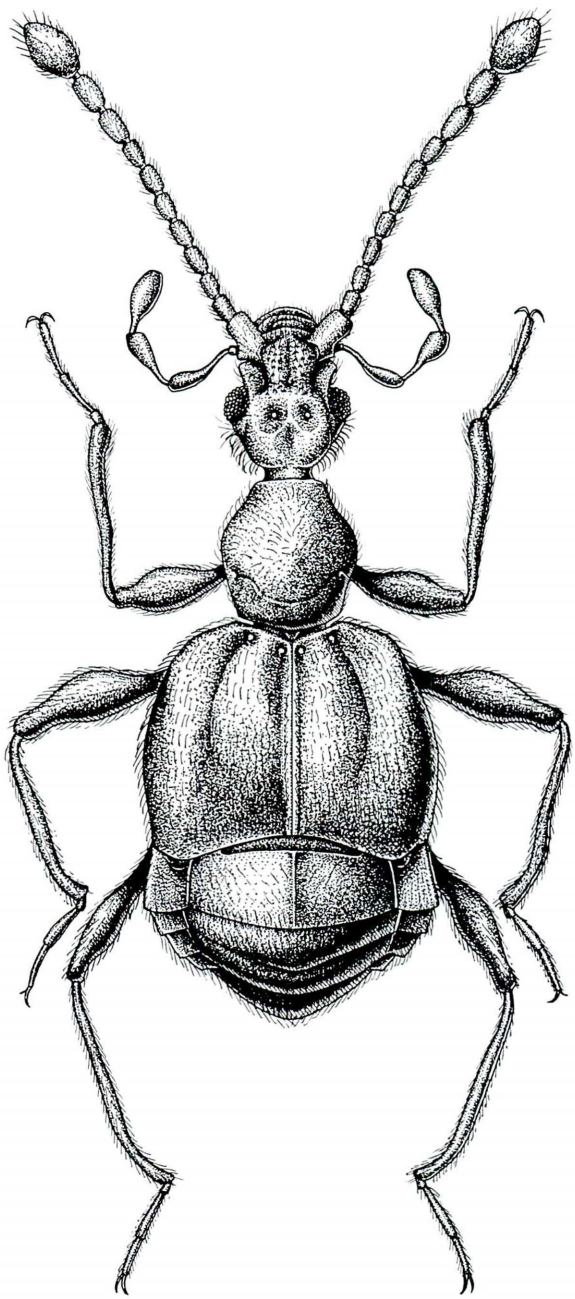

Fig. 1. *Megatyrus menglianensis* gen. et sp. nov., male habitus.

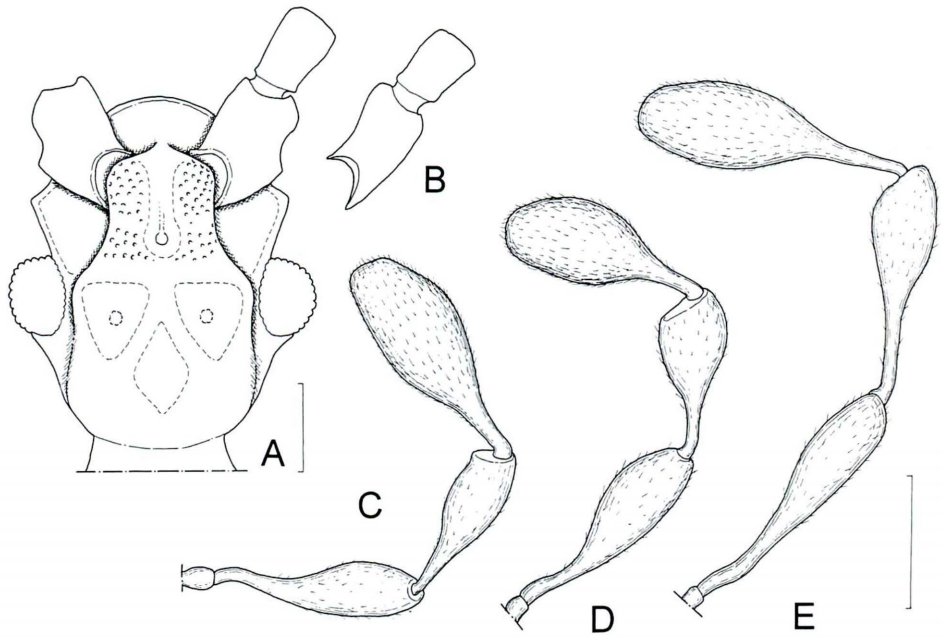

Fig. 2. Heads and maxillary palpi of *Megatyrus*; A, head and antennal segments I to II in dorsal view; B, antennal segments I to II; C–E, right maxillary palpus in dorsal view. —— A, C, *M. menglianensis* sp. nov., male; B, ditto, female; D, *M. laqueus* sp. nov.; E, *M. coni* sp. nov. Scale for A, B: 0.2 mm; scale for C–E: 0.2 mm.

Remarks. The new genus is most closely related to *Tyrus* in similar general body shape and structure of the pronotum. It differs in the four-segmented maxillary palpi lacking the palpal spine (pseudosegment), more pedunculate maxillary palpi and the abdominal tergite IV longer than V. On the other hand, it is also similar to the genus *Hamotopsis* belonging to the subtribe Somatipionina in having the large and robust body, the basally projected first antennal segment in the male and the well sclerotized and complicated genital plate in the female.

Key to the Species of the Genus *Megatyrus*

1. Antenna short, segments V–VIII each short and cylindrical, as long as wide; maxillary palpus short and thick, segment III 2/3 times as long as II, twice as long as wide; median lobe of male genitalia with a long and stout lateral stalk on the left side; endophallus loop-shaped. . . . . *M. laqueus* sp. nov.
— Antenna long, segments V–VIII each subcylindrical, longer than wide; maxillary palpus long, segment III slightly shorter than II, more than 2.5 times as long as wide . . . . . 2.
2. Body small (3.30 mm in female); maxillary palpus long and slender; segment III

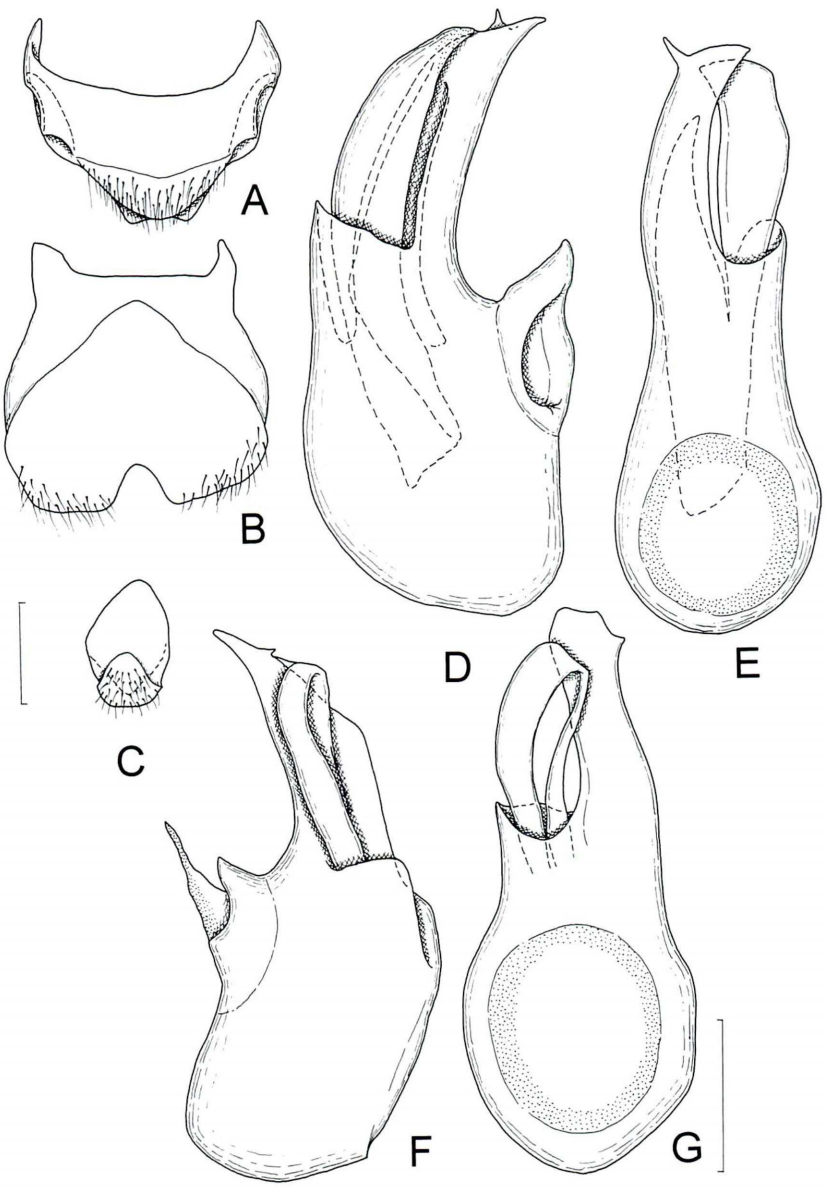

Fig. 3. Male genital segments of *Megatyrus*; A, tergite VIII; B, sternite VIII; C, sternite IX; D, F, male genitalia in lateral view; E, G, ditto in dorsal view. —— A–E, *M. menglianensis* sp. nov.; F, G, *M. laqueus* sp. nov. Scale for A–C: 0.2 mm; scale for D–G: 0.2 mm.

slightly shorter than II, about 3 times as long as wide, narrowed in basal 2/5; IV 3 times as long as wide, narrowed in basal 2/5; abdominal tergite VIII weakly convex on dorsal surface with a pair of small projections near the middle in female ..... *M. coni* sp. nov.

— Body large (3.83 mm in male, 3.48 mm in female); maxillary palpus short and thick, segment III elongate, 2.5 times as long as wide, narrowed in basal 1/3; median lobe of male genitalia with a long and acute lateral stalk on the right side; endophallus elongate and simple; abdominal tergite VIII large and thick, with a large conical projection at the middle and a large internal apophysis on internal side in female ..... *M. menglianensis* sp. nov.

Megatyrus menglianensis sp. nov.

(Figs. 1, 2 A–C, 3 A–E, 4 A–D)

Etymology. The specific name is associated with the name of place, "Menglian" where the species was found.

Holotype male, Menglian, 1,800 m alt., Tengchong Xian, Yunnan, SE. China, 15–X–1996, S. NOMURA leg. (NSMT). Paratype: 1 female, the same data as holotype (NSMT).

Description. Male (Fig. 1). Body length 3.83 mm, width 1.50 mm. Head (Fig. 2 A) with short and shallow antebasal depression between vertexal foveae. Maxillary palpi (Fig. 2 C) elongate, segment II strongly narrowed in basal 2/5, III shorter than II, 2.5 times as long as wide, narrowed in basal 1/3, IV as long as II, swollen in apical part, narrowed in basal 1/4. Antennae length 1.98 mm; segment I 2.2 times as long as II; II–IV subequal; V–VII subequal and slightly shorter than II–IV; VIII about 1.2 times as long as VI; IX and X subequal, each ovoid, longer than wide; XI twice as long as X, ovoid and 1.6 times as long as wide.

Male genitalia (Fig. 3 D, E) strongly sclerotized; parameres absent; median lobe narrowed apically, with a long, robust and incurved lateral stalk on the right side, acute at apex, with a small denticle on the outer side of the apex; endophallus long, broad and elongate, about as wide as lateral stalk in apical part, weakly incurved.

Female. Body length 3.48 mm, width 1.45 mm, antennal length 1.95 mm. Very similar to male, but antennal segment I (Fig. 2 B) narrower than that of male, subcylindrical in basal part. Abdominal tergite VIII (Fig. 4 A, B) large and thick, convex, with a large conical projection at the middle, a weak carina in posterior part and a small V-shaped emargination at the middle of hind margin, and also with an internal apophysis on the inner side of hind margin; sternite VIII (Fig. 4 C) subcrescent, bisinuate on posterior margin; genital plate (Fig. 4 D) sclerotized and complicated; dorsal sclerite including a small trapezoidal and a transverse complicatedly folded plates; ventral sclerite containing a transverse arcuate plate and a pair of elongate ones.

Distribution. Yunnan, China.

Remarks. This new species is characterized by the large body, the small and

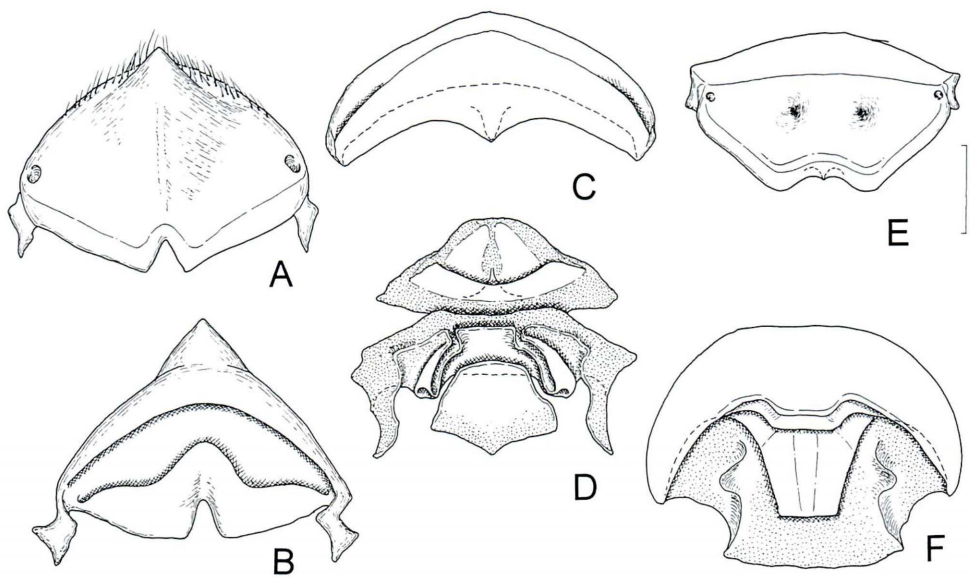

Fig. 4. Female genital segments of *Megatyrus*; A, E, tergite VIII in posterior view; B, ditto in internal view; C, sternite VIII; D, genital plate in ventral view; F, sternite VIII and genital plate in ventral view. —— A–D, *M. menglianensis* sp. nov.; E, F, *M. coni* sp. nov. Scale: 0.2 mm.

shallow antebasal groove on the head between vertexal foveae, the short maxillary palpus and the male genitalia with long, acute and unidenticulate lateral stalk on the right side of the median lobe and elongate and simple endophallus.

Megatyrus laqueus sp. nov.

(Figs. 2 D, 3 F, G)

Etymology. The specific name is formed in reference to the shape of the endophallus of the aedeagus which looks like a loop.

Holotype male, Deo O Quy Ho, 1,670 m alt., near Sa Pa, Lao Cai Prov., N. Vietnam, 22–V–1998, S. NOMURA leg. (IEBR).

Description. Male. Body length 3.58 mm, width 1.45 mm. Head with small and very shallow antebasal depression between vertexal foveae. Maxillary palpi (Fig. 2 D) slightly shorter than that of *M. menglianensis*; segment II narrowed in basal 1/3; III apparently wider than that of the other species, about twice as long as wide, strongly narrowed in basal 1/3; IV the widest, slightly shorter than II, 2.5 times as long as wide, strongly narrowed in basal 1/4. Antennae length 1.90 mm; segment I 2.2 times as long as II; II and IV subequal; III slightly longer than II; V–VIII subequal and almost quadrate; IX and X subequal, each ovoid; XI twice as long as X and 1.5 times as long as wide.

Male genitalia (Fig. 3 F, G) similar to those of *menglianensis* in shape in lateral

view; median lobe strongly sclerotized, with a long lateral stalk on the left side in apical part; lateral stalk subparallel-sided, truncate at apex and with a short denticle on external side near apex; endophallus long and nallow, strongly curved near apex, loop-shaped.

Female unknown.

Distribution. Northern Vietnam.

Remarks. This species is very similar in general appearance to *M. menglianensis* sp. nov. It differs from *menglianensis* by the small size, the short and more thickened maxillary palpus and the shorter antennae with segments V–VIII almost quadrate. The males of the two species can be easily distinguished by the different shape and structure of the aedeagus.

Megatyrus coni sp. nov.

(Figs. 2 E, 4 E, F)

Etymology. This species is dedicated to Professor Dr. VU Quang Con who is the president of the Institute of Ecology and Biological Resources (IEBR), National Centre for Natural Science and Technology of Vietnam, Hanoi.

Holotype female, Dam B'Ri, ca. 900 m alt., near Bao Loc, Lam Dong Prov., S. Vietnam, 4–V–2000, S. NOMURA leg. (IEBR).

Description. Male unknown. Female body length 3.30 mm, width 1.30 mm. Head lacking shallow antebasal groove between vertexal foveae. Maxillary palpi (Fig. 2 E) apparently longer than those of the other species; segment II narrow in basal half; III slightly shorter than II, about 3 times as long as wide, narrowed in basal 2/5; IV the widest, about as long as II, 3 times as long as wide, narrowed in basal 2/5. Antennae length 1.90 mm.

Female genital segments (Fig. 4 E, F) quite different from those of *menglianensis*; tergite VIII short and transverse, nearly trapezoidal, weakly convex on dorsal surface, with a pair of small lateral foveae, a pair of small conical projections near the middle and shallow emargination on median part of posterior margin, without internal apophysis; sternite VIII subcrescent, with a short and trapezoidal median expansion on posterior margin; genital plate weakly sclerotized, containing a large trapezoidal sclerite on posterior part.

Distribution. Southern Vietnam.

Remarks. This species is similar in habitus to the other members of this genus. It is, however, characterised by having the smaller body and the longer and slenderer maxillary palpi. In the female, it is separated from *M. menglianensis* by the small eighth abdominal tergite with a pair of small conical projections lacking large central projection and internal apophysis.

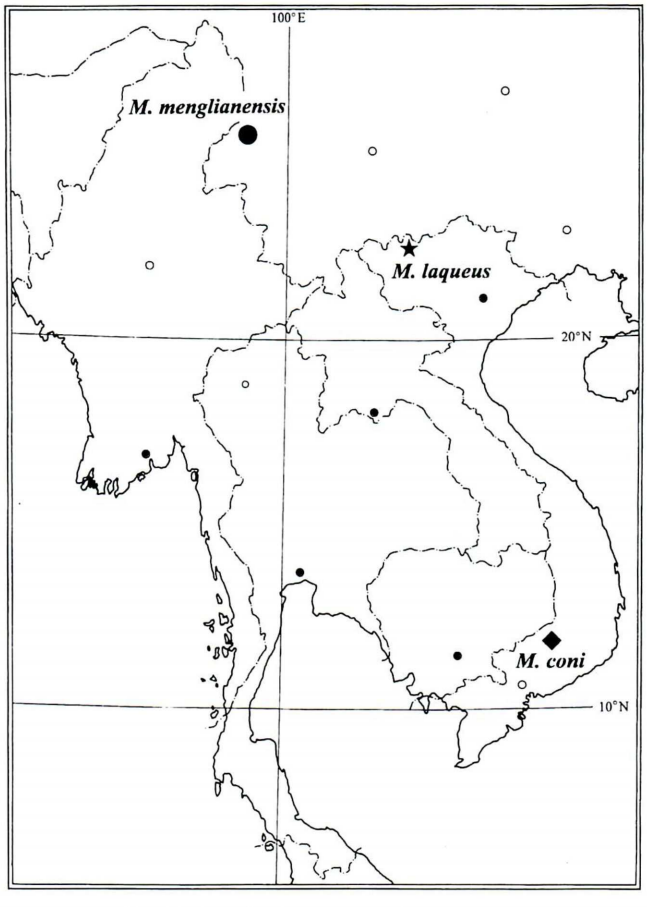

Fig. 5. Distribution map of *Megatyrus* spp.

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要　　約

Peter HLAVÁČ・野村周平：東洋区のコケアリヅカムシ族に関する分類学的研究 III. 中国およびベトナム産の新属 *Megatyrus*（コウチュウ目ハネカクシ科アリヅカムシ亜科）. —— コケアリヅカムシ族 Tyrini，コケアリヅカムシ亜族 Tyrina に属する新属 *Megatyrus* を，中国およびベトナム産の以下の3新種に基づいて創設した：*M. menglianensis*（タイプ種．中国云南省騰沖县勐連），*M. laqueus*（ベトナム北部ラオカイ省サパ近郊オキホ峠），*M. coni*（ベトナム南部ラムドン省バオロク近郊ダンブリ）．本属は大型で頑丈な体形をしており，一見，東南アジアに広く分布する *Hamotopsis* 属によく似ているが，小顎肢の形状が *Tyrus* 属に類似し，Tyrina 亜族に分類される．小顎肢第2~4節がいずれも大きく，先端が卵形に膨大し，第4節先端に突起が見られない点がきわめて特異な形質である．

第2著者の野外調査に関しては文部省科学研究費（国際学術研究）課題番号07041131および09041167，文部科学省科学研究費（国際学術研究）課題番号13575015の助成を受けている．

Reference

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